

AN ACTUARIAL DESCRIPTION OF PENITENTIARY INMATES

An abstract of a thesis by
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The problem.

The problem was to obtain Q sort statement assignments for two code types of Minnesota Multiphasic Personality Inventory (MMPI) profiles and compare these applications with a random sample to determine whether any patterns of differences exist and to state these differences.

Procedure.

MMPI profiles were obtained from inmates incarcerated at the Iowa State Penitentiary. Two code types were selected from the population of one thousand inmates. Q sort statements were selected and raters were chosen to assign the Q statements to each subject. Raters were instructed to read the subject's treatment file and assign Q statements ranging from "most descriptive" to "least descriptive." The same assignment process was then applied to a random sample.

Findings.

Percentage agreement between the raters was recorded and analyzed. The 4'2 and 4'9 profile code types were selected. The investigator found several similarities and differences between the two codes and the random sample. Several areas of contrast were also noted in descriptive data which was recorded in the treatment files: age, prior incarcerations, attitude regarding childhood, etc.

Conclusions.

The investigator's findings appeared to correspond with those found by Marks and Seeman in their atlas. It appears that Q statement applications in a penitentiary are similar to those found in other clinical settings.

Recommendations.

A recommendation for future studies is to identify additional profile code types and eventually use for prediction of inmates' adjustment to incarceration.

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DESCRIPTION OF
PENITENTIARY
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Jerry L. Solberg

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CHAPTER I

Introduction

A substantial amount of material has been written regarding the utilization of the Minnesota Multiphasic Personality Inventory (MMPI) in the assessment of various personality disorders. Such personality tests are utilized extensively in clinical settings where diagnosis and treatment recommendations are required.

The MMPI is a personality inventory consisting of 550 statements. Anastasi (1961) reported that the statements apply to a wide array of areas: "health, psychosomatic symptoms, neurological disorders, and motor disturbances; sexual, religious, political, and social attitudes; educational, occupational, family, and marital questions; and many well known neurotic or psychotic behavior manifestations [p. 498]."

The norm group consisted of approximately 700 persons who were visitors at the University of Minnesota hospitals (Anastasi, 1961). Initially, nine scales were developed and named for their identification of various abnormal conditions which they identified: 1--hypochondriasis, 2--depression, 3--hysteria, 4--psychopathic deviate, 5--masculinity-femininity, 6--paranoia, 7--psychasthenia, 8--schizophrenia, and 9--hypomania. Subsequently, a social introversion scale was added in addition to four

validity scales.

A T score of 50 on the MMPI profile sheet is the equivalent to the score obtained by 50% of the normal sample. Anastasi (1961) has reported that a standard deviation of 10 was assigned for the purpose of interpreting the profile. T scores are used to identify the deviation from the standardization group. Therefore, T scores between 30 and 70 would represent scores within two standard deviations from the mean.

Traditionally, the majority of the clinicians working with the MMPI have made reference only to the scales elevated above a T score of 70 in their interpretation of the MMPI profile. More recently, MMPI researchers, such as: Gilberstadt & Duker (1965), and Marks & Seeman (1963) have been utilizing the overall pattern of scale placements for interpretation purposes. Anastasi (1961) has noted that the individual scale elevations are not as important as the overall scale pattern.

Marks & Seeman (1963) reported that Meehl has stressed the importance of studies utilizing Q statements in working with the MMPI. Meehl stated that "the list of Q statements will serve to jog one's memory so as to prevent mere forgetting to consider a personality facet that is objectively correlated with the kind of profile

under scrutiny [p. ix]."

Gilberstadt & Duker (1965) also noted Meehl's recommendation that studies dealing with the MMPI be constructed using trait descriptions based on average Q sort placements.

Marks & Seeman (1963) have conducted extensive research on the MMPI. In their book, the authors identified 16 MMPI profile code types and conducted research utilizing a list of Q statements. The product of their research was an atlas for an actuarial description of abnormal personalities. According to the authors, "actuarial description occurs when there are explicit rules by which specified descriptive attributes are assigned to individuals on the basis of experimentally demonstrated associations between specified data and the descriptive statements [p. 5]."

Marks & Seeman (1963) based their study on 1200 hospitalized patients who were admitted to the University of Kansas Medical Center Psychiatric Service. Gilberstadt & Duker (1965) have reported that the descriptors in their book would probably apply to patterns found in other settings. Marks & Sines (1969) reported the findings of Sines in which he found that 4'3 profiles, originally obtained from state hospital inpatients, included basically the same descriptors as those with the 4'3

profiles found with penitentiary inmates.

The purpose of this paper is to obtain Q sort statements for two code types of MMPI profiles and compare these code types with a random sample to determine whether any patterns of differences exist and to state these differences.

CHAPTER II

Methods

The methodology employed by Marks & Seeman (1963) was quite similar to that used by Gilberstadt & Duker (1965). Initially, Marks & Seeman classified MMPI profiles into various code types. The code types were obtained by recording hospital admissions over a one year period. The profiles were then grouped into categories depending on the two or three highest scale elevations.

Marks & Seeman (1963) determined that a minimum of at least 20 profiles were required to offer an adequate representation of a code type. Subsequently, the authors inspected the profiles for "goodness of fit." This procedure further refined the code type samples which allowed for additional similarity of scatter and representation of the code type. This process yielded the rules which the profile must conform to in order to be included in a particular code type.

Marks & Seeman (1963) then used 19 sorters for the purpose of assigning Q statements to each individual profile. The authors chose 108 various Q sort statements for assignment purposes. The sorters were instructed to apply the 108 Q statements in nine separate categories ranging from "most descriptive" to "least descriptive."

The assignment of Q statements for each case was

based on social, medical, and other informative data which was available to the sorters. Marks & Seeman (1963) reported "for each code type the mean of the Q statement placements based on the five most representative patients constituted the actuarial Q sort of description for that code type [p. 69]."

Gilberstadt & Duker (1965) included items of description if they occurred in 50% or more of the sample.

Subjects

The subjects used in this study were inmates at the Iowa State Penitentiary, Fort Madison, Iowa. The inmates at this maximum security institution are convicted felons serving sentences for a wide array of offenses against society.

The methodology adopted by this investigator was taken from that employed by Marks & Seeman (1963).

Procedure

One thousand profiles of men currently, and recently incarcerated at the Iowa State Penitentiary were recorded to obtain a frequency distribution of code types for this study. The 4'2 and 4'9 MMPI code types were eventually chosen for this study. The investigator found that these code types provided an adequate study sample. Other investigators have found that a minimum sample of 20 was needed to study

a particular code type; therefore, this number was required in this study.

Thirty-two MMPI profiles were of the 4'9 code type. These profiles each contained an elevated 4 and 9 scale. It was necessary that the validity scales all be within the normal range limits (30-70 T score). Twenty-three MMPI profiles contained scale elevations on the 4 and 2 scales. These profiles were also required to contain validity scales within the normal range limits. Figure 1 contains the mean 4'2, 4'9, and random sample profile codes.

The investigator found that only the 4 code type had a greater representation in the breakdown of profile code types (N=260).

The 4'2 and 4'9 code types provided the needed study sample. Twenty profiles from each group were selected for further analysis. The 20 profiles in each code type were carefully studied by the investigator for similarities in overall scale pattern placements or "best fits." After a careful screening process, the five "best fits" for each code type were selected for sorting purposes by the Q raters.

The following rules were devised by the investigator:

4'2

- 1) 4 and 2 greater than 70 T-score

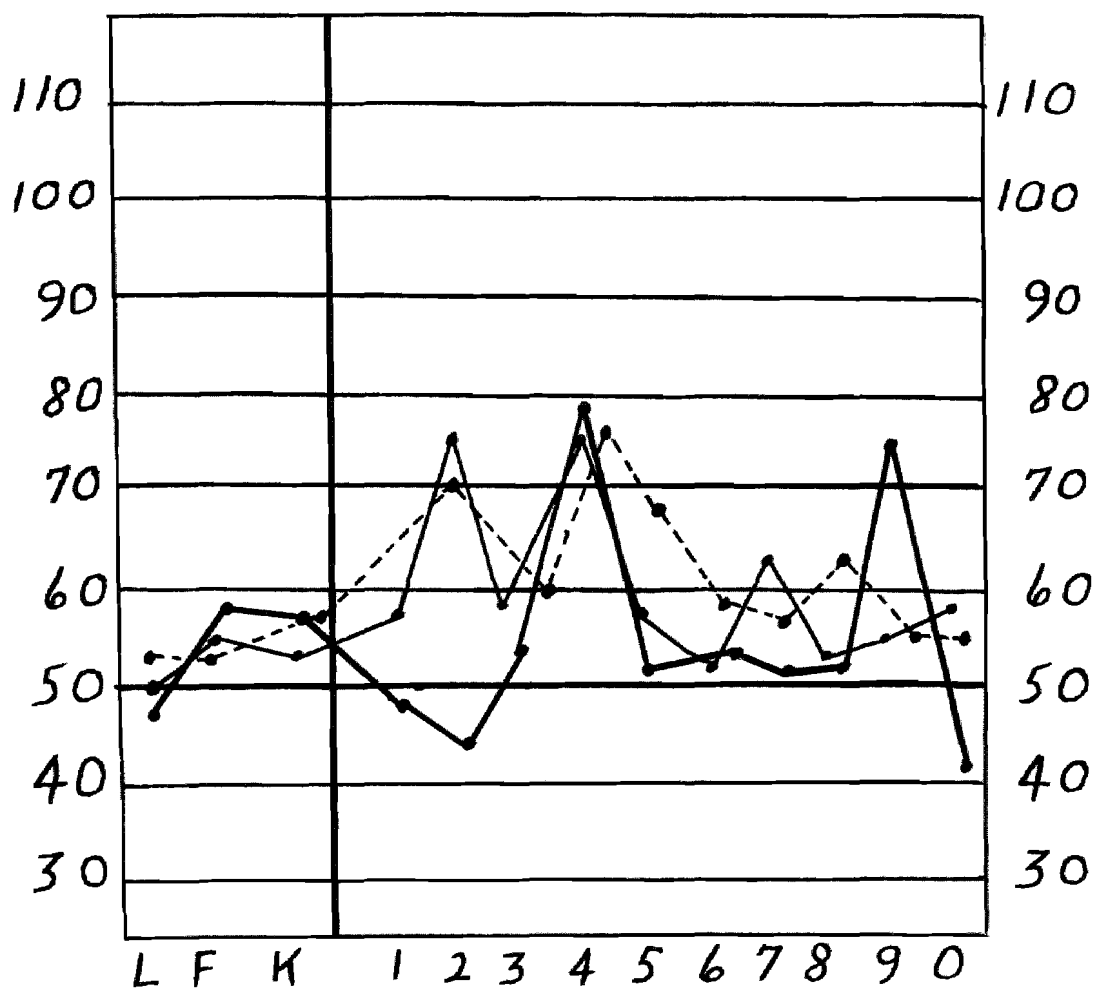


Fig. 1 Mean MMPI profiles for the 4'2, 4'9 and random code types.

————— 4'2 Code Type
 ————— 4'9 Code Type
 - - - - - Random Code Type

- 2) No other scale as great as 70 T-score
- 3) 0 scale greater than T-score of 45
- 4) Scale 9, 60 T-score or less
- 5) L, F, K below 65 T-score
- 6) 4 minus 2 less than 5 T-scores
- 7) Scale 7 greater than T-score of 50

4'9

- 1) 4 and 9 greater than 70 T-score
- 2) No other scale as great as 70 T-score
- 3) 0 scale less than T-score 50
- 4) L, F, K below 65 T-score
- 5) Scale 2 below 60 T-score
- 6) Scale 7 below 55 T-score

The 4'2 and 4'9 profiles used in this study were all required to conform to the rules established by the investigator.

Fifty Q sort statements were selected by the investigator for use in this study (Appendix A). The items were selected from 108 statements which were used by Marks & Seeman (1963) in the construction of their atlas. Fifty statements were selected by a refinement process. Experience gained from reading hundreds of treatment files was beneficial in selecting the statements which could be applied to inmates by reading their files.

Each treatment file contained an admission

summary. This summary is compiled during the first month of the client's incarceration. The admission summary contained a detailed description of the inmate's past social history and recommended institutional program participation.

A progress report was also available for each rater's examination. A progress report was prepared for each inmate after he had been incarcerated for an 18 month period. The progress report consisted of a detailed description of how the inmate had adjusted to the institution. The report included: program participation, custody report, and the client's current psychological status.

In selecting the representative sample for each code type it was necessary for the subject to have been incarcerated for at least an 18 month period. This provided the raters with additional material for a better understanding of the performance of each inmate.

The MMPI profile sheet was removed from each treatment file before it was presented to the rater. The raters were instructed to assign the 50 Q statements ranging from the "most descriptive" to "least descriptive" as applied to each client. Raters were instructed to assign Q statements using the information contained in the treatment file.

A random sample was then selected and the raters were instructed to assign Q statements in the same manner used for the 4'2 and 4'9 assignment procedure

The investigator used the first 20 descriptive Q statements applied to each individual by the rater as being a "most descriptive" statement. The last 20 statements applied to each subject were identified as being the "least descriptive" statements.

It was determined that agreement between the two raters would be required to be at least 70% before the Q statement item could be considered either "most" or "least" descriptive. The Q statement was required to appear in the most or least category at least 7 times out of 10 before it could be said to be descriptive of the 4'2 or 4'9 code type.

The investigator also recorded information of importance from each of the five 4'2 and 4'9 treatment files: childhood environment, marital history, diagnosis by institutional psychologist, and prison misconduct reports.

Group membership rules were then devised and defined. For future descriptive statements to apply, the profiles would be required to fit the rules for the particular code type.

CHAPTER III

Results

The results of the Q statement application procedure yielded several similarities in the "most descriptive" Q statements as applied to the 4'2 and 4'9 profile code types. As reported in Table 1, there was agreement between the raters in 29 instances at, or above, the 70% requirement which was necessary for the item to be classified as being descriptive. Both groups were characterized as being egocentric, self-centered and selfish. The groups were also described as lacking the capacity to control their own impulses and a tendency to act with insufficient thought. The items used in the tables are numbered according to the key listed in Appendix A.

Table 1

Percentage Agreement Between Q Statement Raters
"Most Descriptive" Statements

Code Type	70%	80%	90%	100%
4'2	46,4,23,28,43	50,17,19,20,36		
4'9	24,28,44,49		21,46	20,17
Random	8,14,25,47	1,16,17,38	45,41	23

The 4'2 code type subjects were described as being more tense and sensitive than the 4'9 type. They were also described as displaying a tendency to avoid close

relationships with other people. The raters also reported that the 4'2 subjects possess little diagnostic insight into their own behavior.

The 4'9 code type subjects were characterized as excitable, demanding, and possessing a basic insecurity and need for attention. The most frequently applied "least descriptive" statement is that they are readily dominated by others. A complete listing of the "least descriptive" statements is reported in Table 2.

Table 2
Percentage Agreement Between Q Statement Raters
"Least Descriptive" Statements

Code Type	70%	80%	90%	100%
4'2	1,13,14,16,22,41	35	26	18,40
4'9	18,42,34,29,	3,40,39	5,22,26	6
Random	19,49,48,36,35,29	12,44,37,34,27	5,6,31	

The Q statement percentage agreement for the randomly selected profiles is also reported in Tables 1 and 2. High percentage agreement for this sample was found in the area of utilization of various defense mechanisms.

Table 3 lists the MMPI profile distribution for the entire population used in this study. The 4 scale elevation appears to be very common at the Iowa

State Penitentiary. For the entire sample, the 4 scale was elevated on approximately 39% of the profiles. In addition, several invalid profiles indicated an elevated 4 scale.

Table 3
MMPI Profile Distribution for Entire Sample

1'2'3= 5	scales between
1'2'3'4= 6	30-70 T score=204
1'3= 10	high F=123
2= 18	high K= 47
2'4'7= 7	high F & K= 2
2'3'4= 9	high L & K= 17
4=260	high L & F= 3
4'1= 8	<u>high L, F, & K= 16</u>
4'2= 23	412
4'3= 11	Misc. Profiles=140
4'5= 6	N=1,000
4'7= 10	
4'8= 14	
4'9= 32	
7= 5	
8= 6	
9= 18	
448	

Comparisons of the social history information recorded from the treatment files is reported in Table 4. The treatment files from the 4'2 and 4'9 groups indicated a high frequency of marital discord. Eighty percent of the subjects of each code type had been married and divorced on at least one occasion.

Table 4
Descriptive Data from Treatment Files

Code Type	4'2	4'9
Age	Mean 39-Range 29:55	Mean 27-Range 22:35
Education	11.2-years	10.8-years
Marital	Divorced-80%	Divorced-80%
Military	UHC-40% UD-40% None-20%	UHC-40% UD-20% None-40%
Legal	Prison incarcerations 2.8	Prison incarcerations 1.4
Childhood Environment	Satisfactory 40%	Satisfactory 80%
Intelligence	Revised Beta-110 Range-90:123	Revised Beta-113 Range-94:124
Present Offense	Forgery & false check-100%	Robbery with aggravation-40% Robbery-20% Larceny-20% Assault w/intent to inflict great bodily injury-20%
Institutional Adjustment (incidence of misconduct reports in first 18 month period)	20%	40%

The 4'2 and 4'9 profile code types produced very similar Revised Beta Intelligence Quotient scores; 110 and 113 respectively. Educational attainment levels were also comparatively similar for both groups as noted in Table 4.

The 4'2 code type subjects reported less positive feelings regarding their childhood home environment. Eighty percent of the 4'9 code type subjects reported a satisfactory childhood environment while only 40% of the 4'2 subjects expressed a satisfactory condition in the parental home.

One of the major differences between the groups was the mean age. The 4'2 mean age was 12 years greater than the 4'9 mean age. The 4'2 group had an average of 2.8 previous incarcerations as contrasted to 1.4 for the 4'9 code type.

Social history data revealed that the crimes committed by the 4'2 subjects were nonviolent. Their current offenses all involved forgery and false checks. In contrast, 60% of the 4'9 subjects were serving sentences for crimes involving some form of violence.

Information was obtained from the treatment files pertaining to the institutional behavior adjustment of each inmate covering an 18 month period of incarceration. The 4'2 code type had a 20% incidence of misconduct reports as compared with 40% for the 4'9 code type

subjects. The Q statement regarding the tendency to act out was frequently applied to the 4'9 profiles and not to the 4'2 codes.

CHAPTER IV

Discussion

The psychopathic deviate scale present in the two code types appeared to account for the several comparable Q statements as applied to the two profile code types. Dahlstrom & Welsh (1960) reported that the 4 scale elevation describes an individual that has an inability to profit from punishing experiences. The authors stated that these individuals experience difficulties in repeatedly becoming involved in difficulties of a similar kind.

Butcher (1969) noted Carson's statements regarding scale 4. Carson reported that an elevation on the 4 scale in the presence of a depressed 2 scale suggests a poor chance of a positive personality change occurring. The author also noted that a 4'9 elevation is frequently associated with some type of acting out behavior.

The investigator reviewed the Marks & Seeman 4'9 code type. The statements applied by the investigator's raters indicated a definite similarity to the raters used by Marks & Seeman in the preparation of their atlas. The writer could not locate a similar comparison group for the 4'2 code type.

Marks & Seeman (1963) have reported that the 2 scale on the MMPI is the most frequently occurring

elevation in a psychiatric population. The authors stated that the 2 scale elevation may be a prognostically hopeful sign while the 4'9 code is indicative of unfavorable prognosis. Marks & Seeman have reported that an elevation of the 2 scale often reflects an unhappiness with an individual's self-concept. Therefore, one could conclude that the 4'2 subjects would be more receptive to staff attempts to modify their behavior.

Gilberstadt & Duker (1965) have reported that in their study the 4'9 subjects were generally "overindulged" by their parents. The authors reported that parental deficiencies appeared to be in evidence in the area of providing authority and control for the 4'9 code type. This "overindulgence" could account for the 4'9 types positive verbalizations regarding their childhood environments.

The descriptive data collected from the treatment files provides some interesting data. It appears that the initial MMPI profiles may prove to be useful for prediction of inmate adjustment while incarcerated at the penitentiary. The adjustment in this paper was determined by the incidence of misconduct reports. However, chronological age may be a significant factor. The mean age was 12 years greater for the 4'2 type as compared to the 4'9. In addition, the 4'2 subjects

had exactly twice the mean number of prior penitentiary incarcerations. This finding could also be a factor in each group's ability to make a satisfactory adjustment to prison. Perhaps the older inmates are better equipped, through their prison experience, to cope with incarceration.

The custodial and treatment sorters appeared to generally classify the subjects in a similar fashion. There was substantial agreement between the raters in the assignment of Q statements to the subjects included in the random sample. The writer assumed that there would be few areas of agreement between the raters for the random sample. However, the random sample apparently yielded a rather homogeneous group. If the study was repeated, it is doubtful that another such similar group could be selected.

The raters were cautioned to assign Q statements to each subject primarily on the information contained in the client's casefile (MMPI profile removed). However, the investigator did attempt to have each subject's correctional counselor rate subjects assigned to his caseload. It was felt that this would provide a more accurate description of the subject. The other rater was used for all cases. The investigator attempted to gain some sort of consistency by this method.

Limitations

Undoubtedly, the raters were probably more familiar with some subjects. The continual movement of inmates places limitations on this type of research. In addition, a training session for the raters may have been beneficial. Perhaps a training session for the raters would have provided a more precise rating system.

Implications for Further Research

The small sample groups used in this research appears to be a definite limitation of the project. Future research could consist of recording the MMPI raw scores on all men entering the institution. Subsequently, after an 18 month period of incarceration, raters could be chosen to assign Q sort statements. This would allow for additional profile code types to be identified and eventually be used for descriptive and predictive purposes. In addition, future research could involve obtaining a similar group of "normal profiles" and attempt to discover whether any significant relationships can be identified.

Future studies in this area should involve the identification of more code type groups and comparing the results to code types identified by Marks and Seeman, etc. It appears at this time that the results found in a penitentiary would closely resemble those obtained in

other clinical settings.

Future research should prove interesting in this area. Inmates entering the penitentiary who fit the group membership rules found in this paper will continue to be explored in an attempt to validate the research in actuarial description.

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APPENDIX A

PAGE

List of Q statements
used in the study

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Appendix A

1. Is socially extroverted (outgoing)
2. Is argumentative
3. Tends not to become involved in things, is passively resistant
4. Keeps people at a distance, avoids close relationships
5. Is shy, anxious and inhibited
6. Is readily dominated by others
7. Is unpredictable and changeable in behavior and attitude
8. Has shown ability to talk about conflicts in most areas
9. Is open and frank in discussing problems
10. Is resentful
11. Is critical, not easily impressed, skeptical
12. Is apathetic
13. Is cheerful
14. Tends to arouse liking and acceptance in people
15. Has a need to achieve; to strive to do something as well as possible
16. Appears to be poised, self-assured, socially at ease
17. Is egocentric; self-centered; selfish
18. Has the capacity for forming close interpersonal relationships
19. Is tense, high strung and jumpy
20. Undercontrols own impulses, acts with insufficient thought
21. Expresses impulses by verbal acting-out

22. Is a serious person who tends to anticipate problems and difficulties
23. Utilizes rationalization as a defense mechanism
24. Is excitable
25. Utilizes intellectualization as defense mechanism
26. Would be organized and adaptive under stress
27. Is vulnerable to real or fancied threat, generally fearful
28. Possesses a basic insecurity and need for attention
29. Psychic conflicts are represented in somatic symptoms
30. Is evasive
31. Is nervous; tense in manner; trembles; sweats or shows other signs of anxiety
32. Is self-dramatizing, histrionic
33. Is defensive about psychological conflicts
34. Has feelings of hopelessness
35. Complains of weakness and fatigability
36. Is self-defeating; places self in an obviously bad light
37. Exhibits depression (manifest sad mood)
38. Has a need to think of self as unusually self-sufficient
39. Is consciously guilt-ridden, self-condemnatory and self-accusatory
40. Has "diagnostic" insight, awareness of descriptive features of own behavior
41. Has a high aspiration level for self, is ambitious, wants to get ahead
42. Has a good verbal-cognitive insight into own personality structure and dynamics

- 43. Demands sympathy from others
- 44. Utilizes acting-out as a defense mechanism
- 45. Utilizes projection as a defense mechanism
- 46. Resents authority figures and had impulses to resist them
- 47. Is distrustful of people in general; questions their motivation
- 48. Thinks and associates in unusual ways, has unconventional thought processes
- 49. Is demanding, tends to take the attitude "the world owes me a living"
- 50. Is sensitive to anything that can be construed as demand